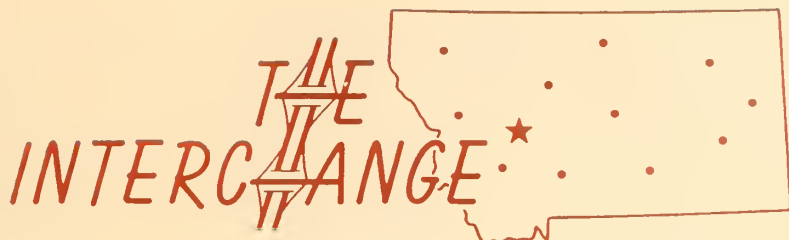


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# MONTANA HIGHWAY PROGRAM

The Department of Highways ends 1982 with prospects for building and maintaining Montana's highway systems far better than at this time last year.

It's been a year of change, and a tough year. But we have moved forward. The major reorganization and other important internal steps have been completed. Several legislative audits have been concluded, the Council on Management has made final recommendation, and the Governor's Transportation Advisory Council and the Legislative Study Committee have published their final reports.

While all the studies ended up making recommendations for areas where we needed to improve — and most of those recommendations have been or are being implemented — there was also unanimous support for an expanded highway program.

Taking these recommendations, the requirements of the 1981 Appropriations Bill, and our own information and judgement about where the highway program should go, we developed the "Report of the 48th Legislature", a program to reverse the deterioration of Montana's primary system.

Starting with an analysis of highway needs put together by both field and Helena office staff, the report points out that Montana's highway systems are falling apart faster than they can be repaired. For instance, on the primary system the number of miles of critical highway grows every year.

To bring all systems up to current design standards would require an additional \$300 million a year, an amount far beyond that which any legislature would approve.

Consequently we looked at our needs from what we called a modified level of service. We recognized we couldn't afford everything we wanted to do, and concentrated on the primary system. With this needs analysis as the basis, the Department's proposed highway program is as follows:

- (1) A Reconstruction Trust program that would dedicate an additional \$40 million per year over the next ten years to reconstruction of the primary system, and establish, for the first time, a preventative maintenance program on all primary miles. Funding would be through an increase in the gas tax of 3½ cents a gallon, diesel fuel of 4½ cents a gallon (with ½ cent going to the cities and counties), increasing the G.V.W. fees by 35%, eliminating the Highway Patrol from the Highway Earmarked account, and using \$15 million per year of coal tax funds.
- (2) An Accelerated Interstate Completion program would move construction of the remaining key gaps forward several years from the current federal funding schedule. Gaps such as Wyoming line — North, Bernice — Basin, and Springdale — West would be closed two to three years earlier. Funding would be by issuing \$50 million dollars worth of bonds to be retired with regular interstate funds over the next 6 to 7 years.
- (3) A stepped up G.V.W. enforcement with more people, increased fines, and greater use of roving scales.

The benefits of this program would be:

- 1. An improved primary system

- 2. All key gaps on the interstate system closed
- 3. A pavement preservation program on all Montana's primaries
- 4. More miles of highway treated than ever before
- 5. Creation of over 1,000 direct jobs in the construction industry

The report goes on to describe the projects that would be built in each Financial District if funding is made available at the recommended level.

Both the report and the program have been well received and should significantly increase the Department's chances of success in the upcoming legislative session. But, as with the changes we have gone through this year, it won't be easy. The uncertainty of the federal gas tax and its impact on Montana at this writing, and the tight competition for limited funds at the state level, make the outcome uncertain.

But I want to thank everyone for helping get us to this point; from truck drivers, to district engineers, to secretaries. Your work and dedication to doing your job and making the Department of Highways better has made 1983 a lot more promising. Thanks and best wishes for the new year.

## AFFIRMATIVE ACTION PLAN REPORTING

The Civil Rights Unit has developed a new Affirmative Action Plan reporting format to assist headquarter's divisions, and the districts, in keeping track of their Equal Employment Opportunity status.

Division Administrators and District Engineers are responsible for compiling the information for their entire division/district before

submitting the report to the Civil Rights Unit.

The purpose of these reports is to assist the divisions/districts to maintain a record of accomplishing their goals according to the 1982-84 Affirmative Action Plan Update. Any additional Affirmative Action items a division/district has accomplished which go beyond the affirmative action plan or performance appraisal requirements should also be included in the report.

The reports are due quarterly beginning January 5, 1983, and thereafter on March 5,

1983, July 5, 1983, October 5, 1983, January 5, 1984, and March 5, 1984. These dates cover the life of the current Department Affirmative Action Plan update.

The Civil Rights Unit will compile all of the data from these reports and submit a status report to the Director. These reports will be submitted on a quarterly basis beginning January 15, 1983.

If you have any questions concerning this form or other EEO/Affirmative Action matters, contact the Civil Rights Unit at 449-4723.



It was all smiles when Governor Schwinden presented \$500 incentive awards to Don Fallang, Preconstruction, Helena, and Joe Finch, Maintenance, Great Falls. Director Wicks looks on.

## GOT A GOOD IDEA?

Got an idea? Have a brainstorm? Think about it for awhile. Could that idea save the State of Montana some money or improve services? If your fleeting thought can be captured and put down on paper, it could also put up to \$500 in your pocket and earn you some recognition.

Two Department employees, Don Fallang of Preconstruction and Joe Finch of Great Falls Maintenance, were each presented \$500 Employee Incentive Awards by Governor Schwinden. They took the time to expand on an idea, record their thoughts, and submit incentive awards applications.

Incentive award applications are available through supervisors by requesting a form from State Personnel Division, Mitchell Building, Helena, Montana 59620; or by calling 449-3871. Completed applications are forwarded to the State Personnel Division. Each application is assigned a number, personal identification is deleted, and the application is assigned to a Department Incentive Awards Committee. The merits of the applications are considered and recommendations are made to the State Program Administrator.

Since June nineteen applications have been assigned to the Highway Incentive Awards Committee. Most of the applications were worthwhile. Some were not cost effective; some were not original; and on those basis twelve were not presently recommended for an award. Five applications are being evaluated and two had enough merit to be recommended for the maximum award of \$500.

Your idea could be the next successful one.

## DOH TO TEST RUBBER PAVEMENT

A one mile test section of a new rubber modified pavement developed in Sweden will be constructed on MacDonald Pass near Helena next summer. The feature of the "Plusride Procedure" that attracted the Department of Highways attention was the new pavement's ability to deform slightly under traffic, causing ice to fracture and be blown clear of the roadway.

Other advantages of the rubber modified asphalt pavement include its excellent aging properties, resistance to studded tire damage, improved skid resistance, absence of asphalt flushing, and the utilization of discarded tires.

The Plusride Procedure incorporates 3% granulated tire rubber, part of which performs as rubber aggregate in the asphalt concrete. Aggregate gradation, hot plant capability, and higher than normal mixing, paving, and compaction temperatures will require the special consideration of those contractors preparing bids on this project for the February 1983 letting. Actual construction is expected to take place in August.

A Bellevue, Washington company, All Seasons Surfacing, holds the U.S. Patent on the Plusride Procedure.



## LETTERS

We'd like to share with you a letter that the Director received recently:

Dear Sir;

I would like to compliment you and your staff for the fine upkeep and engineering of your part of I-15. I feel your department has done the best possible job on building and upkeep of Montana I-15, that the contour and displacement of the land would allow.

The Snow Removal crews are very prompt in clearing the road. There is also very little litter on the roadway.

Your department makes a trip through Montana very enjoyable.

Keep up the good work.

Dale Sheets

Alberta, Canada

## HIGHWAY EMPLOYEE BENEFIT ASSOCIATION

The newly elected members to the Highway Employee Benefit Association for the 1983 year include: Marilyn D'Arcy, president, Dorothy Bruer, Mike Cloud, Kathy Wenzek and Nels Wilkins. Dick Wiley, past president and Louie LaFloe, treasurer, will also serve again this coming year.

## GVW WEIGHT VIOLATIONS

In October and November there were 633 overweight citations issued. There were 19 citations issued for 10,000 to 15,000 pounds, 12 issued for weights between 15,000 and 20,000 pounds, and 7 citations issued between 20,000 and 30,000 pounds. One citation in October and three in November for over 30,000 pounds were issued to Grayrock Trucking, Anaconda.

## RETIREMENTS

Recent retirees with over 25 years of service with the Department include: Charles Owen, Flaxville, 36 years, 8 months; John Berres, Glendive, 34 years, 11 months; Harvey Gould, Missoula, 34 years, 8 months; Leonard Thackeray, Havre, 28 years, 6 months; Arley Wiseman, Great Falls, 27 years, 8 months; Leonard Burg, Livingston, 26 years, 5 months; Harold Heath, Livingston, 26 years, 4 months. Other employees who have recently retired are William Brown, Jordan, 21 years, 4 months; Donald Douglas, Helena, 18 years, 7 months; Leonard Starks, Lima, 13 years, 11 months; and Edward Horgan, Helena, 8 years, 4 months.



## PRECONSTRUCTION MANAGEMENT SYSTEM

The Montana Department of Highways' Preconstruction Management System was developed as a tool to coordinate the preconstruction phase of project development for the Engineering Division.

The Project Management Unit, with Thomas E. Martin as manager, is responsible for maintaining and operating the Preconstruction Management System.

The Preconstruction Management System (PMS) is used to keep engineering personnel informed of required activities to develop a project from inception until it's ready for letting. Management at all levels will be aware of projects that are not on schedule, why the project is not on schedule and what must be done to get it back on schedule.

Activity descriptions, planned manhours and time durations for completing various activities were developed with the help of the various management units within the Department. Management units send an Activity Completion Card to Project Management as their various activities are completed.

Input data is compiled in approximately 45 computer files from which information is extracted to generate various output reports.

Top management could receive the following reports:

- **Program Planning Guide** which identifies manpower, time, cost and ready date for each project in the system.
- **Long Range Project Ready Schedule** lists all projects scheduled to be ready.
- **Projects To Be Let In Next 12 Months** is a list of projects scheduled for each month for any 12 month period.

Middle management could receive the following reports:

**Project Schedule Report** identifies all work activities scheduled for a project.

**Management Unit Activity Schedule** is a list of all scheduled work activities to be completed by a specific time for each unit.

**Unit Schedule Exception Report** identifies activities which have not been completed by their scheduled completion date.

The Department's goal is to construct projects as soon as possible within funding limits. To do this, adequate priority projects must be available to obligate funds. PMS assures that we have manpower and capability to reach our goals and informs managers if they are not on schedule.

The system will establish a stable work program, provide for timely decision making and improve communication inside and out-

side the Department. PMS will increase efficiency for completing all preconstruction activities by improved scheduling and establishing standards to improve performance.

The system will provide a schedule for all activities in the project development procedure, thus coordinating the work of involved staff. Communication will be enhanced because the various reports and schedules produced by the system will be available to all staff members.

The Preconstruction Management System relies on the Project Selection and Priority Programming System to add new projects into the system and to determine the scope of the work to be accomplished. Project Management then coordinates project development through the ready for contract date.

The Preconstruction Management System is implemented and operational. However,

Project Management is now in the process of changing the system to accommodate the reorganization of the Department, and making necessary corrections or additions to the system.

If all levels of management use the system for making policy and operational decisions, the quality of data in the system will increase. The system must be used to be beneficial.



## NEW TRUCKS FOR THE DEPARTMENT

The first of 14 new ten cubic yard capacity trucks began operating on Homestake Pass on I-90 near Butte on December 13th. The new trucks started arriving for assembly in Helena's equipment shops in mid-September. Distribution of six of the new trucks is expected to be complete by the end of December.

Two trucks each are being assigned to the Butte, Missoula, and Kalispell divisions and should be in full operation for the majority of this winter. The remaining eight trucks will be delivered and distributed before summer to four other divisions.

These larger trucks are the first the Department of Highways has placed in service. They are double the capacity of our present five cubic yard trucks, and cost approximately twice as much — about \$60,000. But,

the operating cost per mile will be less by having twice the capacity per haul mile. If expectations hold true the Department should be able to reduce the total number of trucks per road mile after a significant number of the new larger trucks are placed in service.

Cab and chassis units of the new trucks are Ford LN 9000's equipped with Fuller 13 speed transmissions, Cummins Diesel NTC 300 HP Turbo engines, 38,000 pound Eaton Tandem Axles, and Henderson suspension systems. Dump boxes are ten cubic yard Perfections with telescoping front hoists. The trucks are also equipped with Jacobs engine brakes, Bostrum air suspension seats, and in-house installed hydraulic systems capable of operating plow, sander, and dump box.

In the winter the new trucks will be assigned to mountain passes or other areas where large capacity is required for sanding operations. Summer operations will see the new trucks hauling materials such as sand to stockpiles, gravel and oil mix.



Rusty Rigg, Chief of the Equipment Bureau, examines one of the Department's new 10 cubic yard, tandem axle trucks before shipment to the divisions.

## A BRIDGE OVER HISTORIC WATERS

In October of this year, a new bridge spanning the Missouri River near the mouth of the Judith River was officially opened to the public. Locally referred to as the "PN Bridge," this modern steel and concrete structure replaces two ferries that operated in the area; The Lohse family's from 1923 to the present, and before that the Powers-Norris ferry operated by early day trader-rancher partners. The "PN Bridge" is named after Powers and Norris. The bridge is located in the Judith Landing Historic District and across a stretch of the wild and scenic Missouri, an area rich in history.

Motorists traveling across the bridge are able to view a landscape little changed since it was first described over 170 years ago by the Lewis and Clark Expedition. Many natural features and landmarks were originally named by the Expedition, such as the Judith River in honor of Clark's future wife.

Because the bridge was constructed with federal bridge replacement funds, federal regulations required the Department to consider prehistoric and historic resources during planning for the project and to minimize harm to significant resources.

To fulfill this requirement the Environmental Unit conducted an archaeological survey of the project area and gathered information concerning cultural resources located within the entire Judith Landing Historic District. This data was then used to evaluate potential project impacts and to develop measures for minimizing those impacts. Some of these measures related to actual project design, such as keeping the bridge design as low as possible to reduce visual intrusions and replanting trees and reseeding slopes to maintain the District's historic setting. Other measures provided for monitoring, and implementation of emergency procedures should resources be discovered during construction.

The latter measures proved important when the remains of an early fort were uncovered during preparation of an equipment staging area. Construction was immediately halted and the staging area and an access road were relocated. Fortunately, most of the site was situated outside of right-of-way limits and would not be disturbed by further highway construction. DOH took special precautions to preserve the site. Highway personnel and contractors were instructed to avoid the site and the fence delineating right of way limits was shifted.

The Department's consulting archaeologists were called in to conduct historical research and subsurface testing in order to

evaluate the site's significance and to verify its identity. Results indicated the site was likely the ruins of Fort Francis A. Chardon, built by the American Fur Trading Company in 1844 and abandoned in 1886 due to its poor location and strained relations with the Blackfoot Indians.

To preserve the Fort for future generations or a time when more extensive excavation can be undertaken, the site was covered with dirt and soon a natural growth of grass and weeds obscured its location.

In recognition of the District's historical values, the Department will erect historical markers on the north and south bridge approaches. The markers will provide motorist traveling across the bridge an opportunity to learn a little about the area's history.

## TAKE A BREATH AND STOP THE STRESS

Early man survived only because he reacted to life threatening stresses by "fight or flight". Today we seldom face such ominous threats but we often react in the same way. Familiar occurrences in our lives as simple as the ringing of a telephone, the crying of a child, the summons to the supervisor's office and even the non-sound when the car refuses to start triggers an immediate bodily response. We feel the pulse quicken, the heart pound, hands change temperature, breathing is fast and shallow, muscles tighten, but outwardly we try to appear calm and unaffected by the encounter. Soon you may experience a headache, a knot in your stomach, a muscle spasm in your back, or a feeling of great tiredness. If we respond countless times during the day in this manner, fatigue, depression and real physical ailments are the results.

What's a solution? Everyone is ready to suggest "Relax — you must Relax!" This is difficult for us to do and can add even more stress to the distraught.

How can you relax? Think back to when you felt threatened. You were probably breathing in short fast gasps. The body doesn't function well when deprived of necessary oxygen, and quickly reacts. For example, as blood vessels constrict hands and feet become cold. The normal function of adequate breathing can retrieve the stress and promote relaxation.

First, learn to recognize your automatic responses, then change your reaction by controlling your breathing. To learn to control breathing try any of these three exercises several times a day.

1. Lie on your back on the floor, with the spine straight, knees bent, one hand on

the chest and the other on the stomach. Draw in breaths as deeply as possible, with the chest barely rising. Inhale through the nose and exhale through the mouth. Concentrate on the sounds of your breathing and shut out other thoughts. Continue for five minutes.

2. Breathe deeply, let all the air out with a sigh. Allow the air to come back in without forcing yourself. Repeat 10 times.
3. When you feel tense or threatened, STOP and BREATHE deeply three or four times or until you gain control of your reaction. As your ability to initiate relaxed breathing increases, extend the length of time into longer periods of relaxation. Your body and mind will respond positively to the relief of stress. Take a breath and stop the stress!

## AASHTO ANNUAL MEETING

The American Association of State Highway and Transportation Officials held their annual meeting in Orlando, Florida in November. Don Harriott, Administrator of the Engineering Division, represented the Department, and reported the following highlights;

The Route Numbering Committee approved Montana's request for renumbering the relocated portion of U.S. 2 between Kalispell and Columbia Falls.

The Standing Committee on Highways recommended two resolutions to the Policy Committee; one opposing further increases in size and weight limits beyond AASHTO's approved policy; and the other concurring in the findings of the Federal Highway Cost Allocation Study.

The Standing Committee on Highways also discussed AASHTO's policies regarding memorial bridges on Interstate routes. Montana may be in violation on one or more bridges.

The Subcommittee on Design meeting included a presentation by Texas on "Interactive Graphics in Highway Design". They are doing a lot of their roadway and structure design by computer.

The Subcommittee on Internal Audit meeting included a presentation by the Inspector General for auditing. He described a proposal for requiring the FHWA to delay reimbursements to the states for 30 days. This obvious attempt to capture 30 days interest for the Federal Government was strongly argued against.

800 copies of this newsletter were produced at a cost of \$.15 each.  
Les Benedict, Information Officer, Editor

Montana State Library



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